REVERIE

Language Technologies

Transliteration

for Indic Languages

Presented by:
Vivekananda Pani & Bhupen Chauhan

ghoti

gh	o	ti
	ghoti /ˈfɪʃ/ fish	
/ˈɹʌf/ rough	/ˈwɪmɪn/ wOmen	/ˈneɪʃən/ naTion

536 MILLION

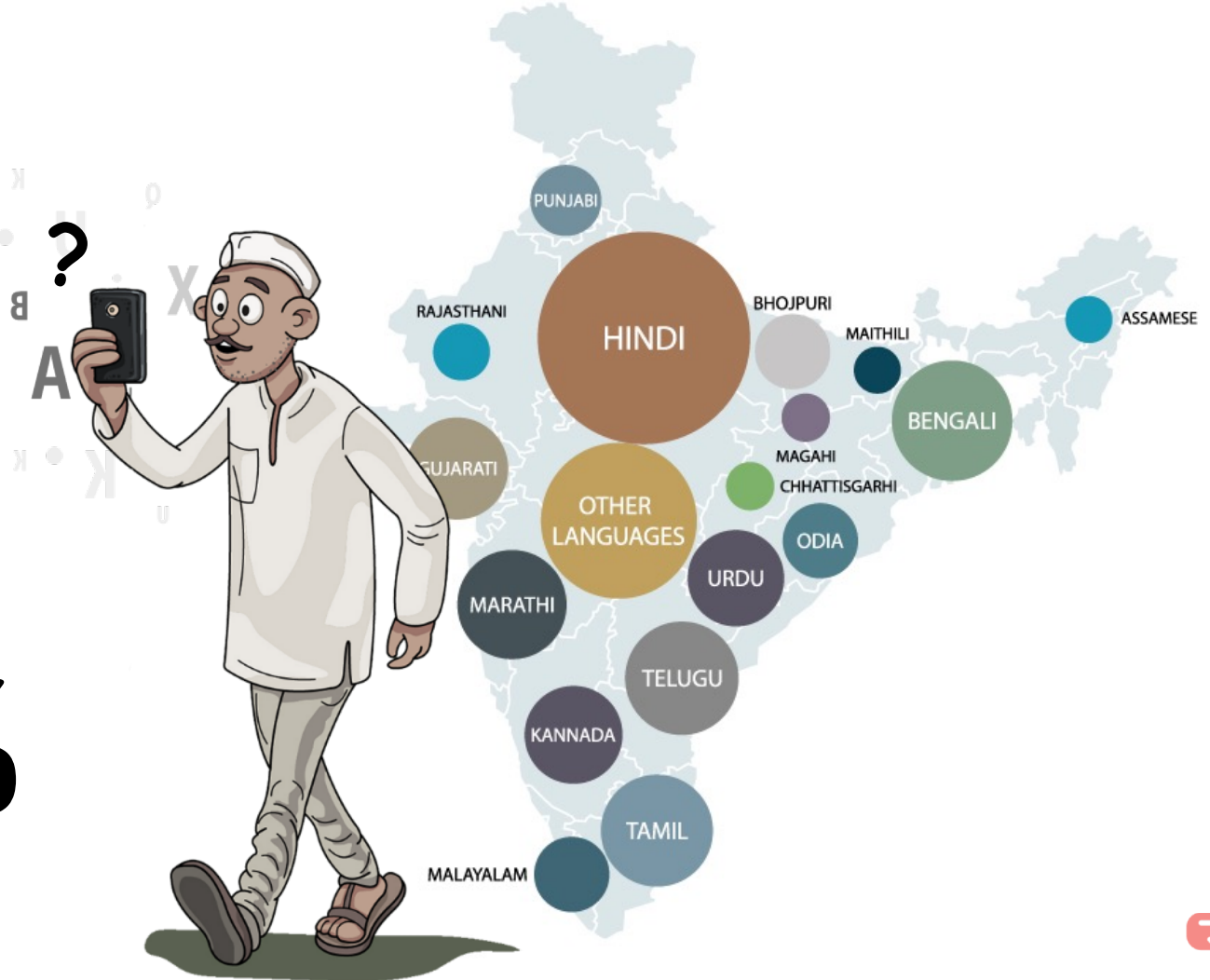
Indian language internet users in 2021

75% of total internet user base

Source: Google-KPMG, **Reverie's Digital Indian Language Report**, Statista, NCPI

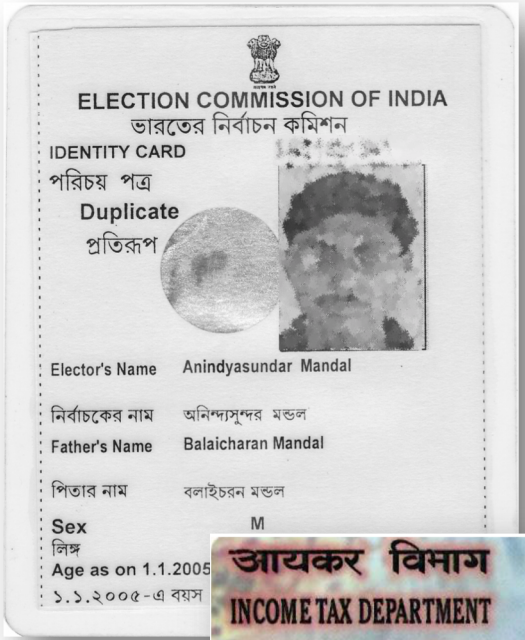
~90%

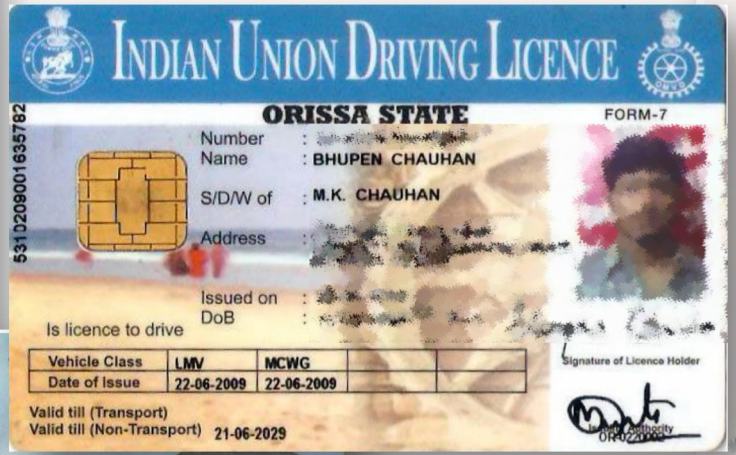
Don’t understand English



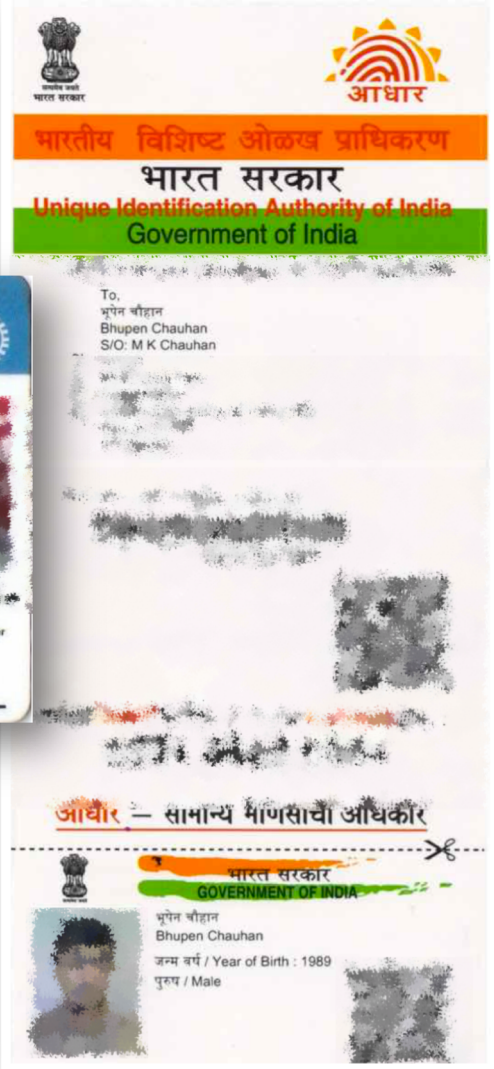
a b c d e f g h i j k l m n o p q r t u s v w x y z

अ आ इ ई उ ऊ ऋ ऌ ऍ ऐ ए ऐ ऑ ओ
ओ औ क ख ग घ ङ च छ ज झ ञ ट ठ
ड ढ ण त थ द ध न ऩ प फ ब भ म य
र ऱ ल व श ष स ह


ELECTION COMMISSION OF INDIA
ভারতের নির্বাচন কমিশন
IDENTITY CARD
পরিচয় পত্র
Duplicate
প্রতিরূপ
Elector's Name Anindyasundar Mandal
নির্বাচকের নাম অনিন্দ্যসুন্দর মন্ডল
Father's Name Balaicharan Mandal
পিতার নাম বলাইচরন মন্ডল
Sex M
লিঙ্গ
Age as on 1.1.2005
১.১.২০০৫-এ বয়স


INDIAN UNION DRIVING LICENCE
ORISSA STATE
FORM-7
Number
Name : BHUPEN CHAUHAN
S/D/W of : M.K. CHAUHAN
Address
Issued on
DoB
Is licence to drive
Vehicle Class LMV MCWG
Date of Issue 22-06-2009 22-06-2009
Signature of Licence Holder
Valid till (Transport)
Valid till (Non-Transport) 21-06-2029

आयकर विभाग
INCOME TAX DEPARTMENT
BHUPEN CHAUHAN
MAHENDRA KUMAR CHAUHAN
13/08/1989


आधार
भारतीय विशिष्ट ओळख प्राधिकरण
भारत सरकार
Unique Identification Authority of India
Government of India
To,
भूपेन चौहान
Bhupen Chauhan
S/O: M K Chauhan
आधार – सामान्य माणसाचा अधिकार
भारत सरकार
GOVERNMENT OF INDIA
भूपेन चौहान
Bhupen Chauhan
जन्म वर्ष / Year of Birth : 1989
पुरुष / Male

Page No.: 1

HDFC BANK

MR. MOHAMMAD ZIAUL HASAN
MAHMOOD MAU (PO) MIR MAU,(PS)MAWAI

FAIZABAD 225402
UTTAR PRADESH INDIA
JOINT HOLDERS :

Nomination : Registered
Statement From: 18/12/16 To: 17/01/17

Account Branch : RUDAULI
Address : MUNCIPAL NO 20/201 AND 20/175, MOHALLA SHEKHANA, STATION ROAD, FAIZABAD
City : RUDAULI 225411
State : UTTAR PRADESH
Phone No. : 9935903333
RTGS/NEFT IFSC : HDFC0002796 MICR: 225240102
Email : [redacted]
OD Limit : 0.00 Currency : INR
Cust Id : 61648341 Pr. Code : 153 Br. Code : 2796
Account No. : 50100097601794 NO EMAIL ID
A/C open date : 19/10/2015 Expected AMB : 5,000.00
Account Status : REGULAR

Date	Narration	Chq./Ref.No.	Value date	Withdrawal Amount	Deposit Amount	Closing Balance*
01/01/17	CREDIT INTEREST CAPITALISED		31/12/16		529.00	64,337.78

NEW DELHI MUNICIPAL COUNCIL
नई दिल्ली नगरपालिका परिषद्
Palika Kendra, Sansad Marg, New Delhi - 110 001
पालिका केन्द्र, संसद मार्ग, नई दिल्ली-110001

ELECTRICITY BILL
बिजली बिल

Bill Amount (₹)	8654.00
Pay By Date	30/06/2015

Name: EX ENG (E) DIV II CPWD I.P.BHAWAN
Billing Address: EX ENG (E) DIV II CPWD I.P.BHAWAN, , 1 RACE COURSE ROAD, NEW DELHI, NEW DELHI - 110001
Code: B17/I - 2202
Supply Address: 8 TEEN MURTI MARG, NEW DELHI - 110001

Consumer No :6201969
MRB / Page / Serial :2235/111/1
Bill Group :MINISTER
Division
Mobile/Tel No :N/A
Sanctioned Load :6.02 [(KVA/KVA)
Contract Demand
MDI Reading :0.000
Zone / Seat No :12
Walking Sequence
Tariff Category :8-CS3
Power Factor :
Bill Cycle: :Jun-2015

Bill Date :12/06/2015
CA No :2394943714
K.No :K91266
Energisation Date :26/10/2014
Meter Type & No :SPM/PE1776
Meter Serial No :
Supply/Con Type :/LP
Bill No :239494272182
Bill Basis :Actual

Customer Care Center Phone No. 011 - 49993555 Email: care@ndmc.gov.in

LATE PAYMENT SURCHARGE (LPSC) CALC PROPORTIONAL TO THE NO. OF DAYS OF DELAY AS PER DERC NO. F.3(313)/TARIFF/DERC/2011-12/VOL-III / C.F. 3467 / 4861 DATED 13.12.2012.
FOR PREVENTION AND CONTROL OF WATER BORNE DISEASES - DRINK CLEAN AND SAFE WATER AND FOLLOW PRINCIPLES OF GENERAL HYGIENE.
PL. DRY THE COOLER EVERY WEEK. DON'T ALLOW WATER STAGNATION IN A CONTAINER IN /OUT OF YOUR HOUSE.
FOR DISCREPANCY, IF ANY, PLEASE CONTACT LO(PH) AT ROOM NO. 314, PARLIAMENT ANNEXE, NEW DELHI-110001
NON – CTS CHEQUES SHALL NOT BE ACCEPTED AT NDMC CASH COUNTER W.E.F. 01-03-2014.
ICICI BILLER SERVICE HAS BEEN STOPPED W.E.F. 07-08-2014. CONSUMER(s) USING THIS SERVICE ARE ADVISED TO USE ICICI NET
NDMC bills can now be paid through Net Banking using aggregator service for (Multiple Banks) through pay online Link at NDMC website

Airtel

Mr Aayush Mehra
IBM India Pvt Ltd
House No-a-8/41
Rana Pratap Bagh
Delhi

New Delhi 110007
DEL
Landmark: Near Cimmunity Hall
8800847311 1187182853
To update your e-mail id, SMS EMAIL <email id> to 121

Get itemized bill free of cost for any of the last six bill invoices, sms ebill <er

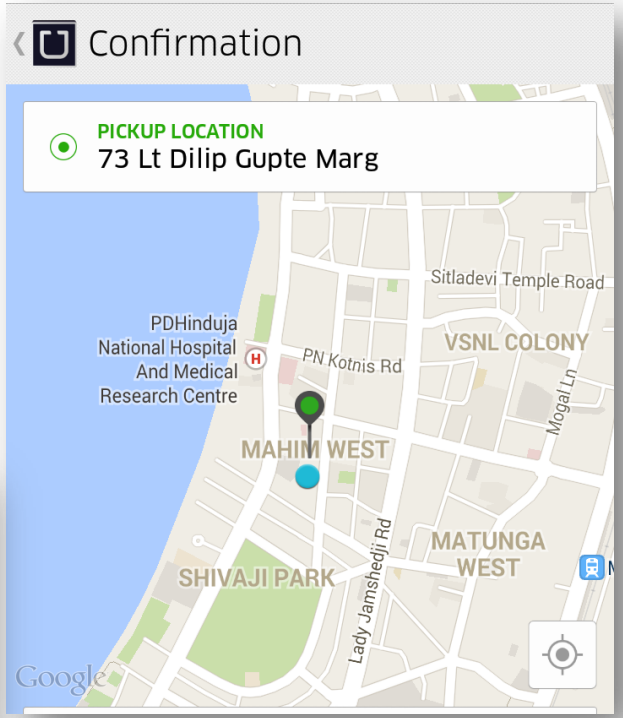
YOUR ACCOUNT SUMMARY

Previous balance		Payments		Adjustments		This month's charges		Amount due on or before 27-Mar-2016	Amount due after 27-Mar-2016
1,009.21	–	88.50	–	924.02	+	1,245.78	=	1,242.47	1,342.47

THIS MONTH'S CHARGES

	amount (₹)
1 One time charges	0.00

Airtel Work



Challenges

NASA

FBI

नासा

एफ.बी.आई

DEEPAK

ICICI

st. johns hospital, 1st cross st, chennai, india

saint

first

street

use batao kaise phone use karte hai

hindi

english

venkatanarasimharajuvaripeta
venkata
narasimha
raju
vari
peta

Varun वरुण বরুন

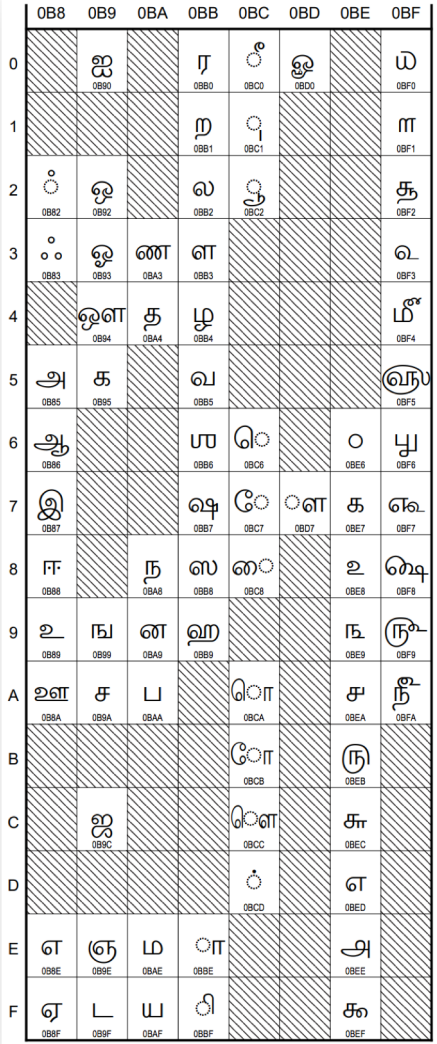
Vayu वायु বায়ু

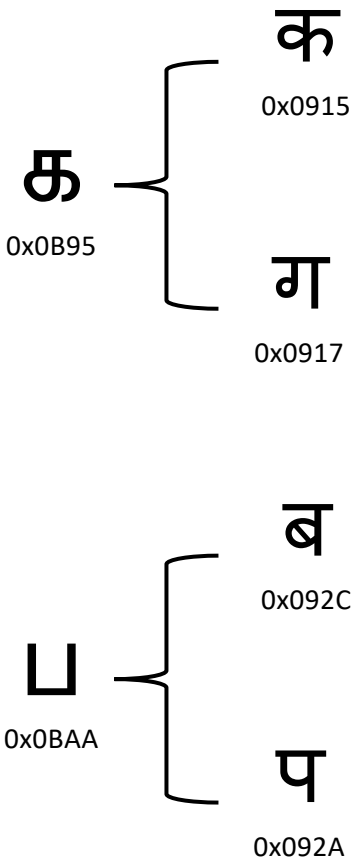
Water वाटर ওয়াটার

Venue वेन्यू ভেন্যু

devanagari

bengali





	0B8	0B9	0BA	0BB	0BC	0BD	0BE	0BF
0		ஐ 0B90		ர 0BB0	ீ 0BC0	ஓ 0BD0		ய 0BF0
1				ற 0BB1	ு 0BC1			ஈ 0BF1
2	ஃ 0B82	ஒ 0B92		ல 0BB2	ூ 0BC2			ஆ 0BF2
3	ஃ 0B83	ஓ 0B93	ண 0BA3	ள 0BB3				ஊ 0BF3
4		ஔ 0B94	த 0BA4	ழ 0BB4				ஸ 0BF4
5	அ 0B85	க 0B95		வ 0BB5				ஹ 0BF5
6	ஆ 0B86			ஶ 0BB6	ெ 0BC6		ஂ 0BE6	ப 0BF6
7	இ 0B87			ஷ 0BB7	ே 0BC7	ள 0BD7	க 0BE7	ஈ 0BF7
8	ஈ 0B88		ந 0BA8	ஸ 0BB8	ை 0BC8		உ 0BE8	ஷ 0BF8
9	உ 0B89	ங 0B99	ன 0BA9	ஹ 0BB9			ங 0BE9	ஜ 0BF9
A	ஊ 0B8A	ச 0B9A	ப 0BAA		ொ 0BCA		ச 0BEA	ஶ 0BFA
B					ோ 0BCB		ஞ 0BEB	
C		ஜ 0B9C			ௌ 0BCC		௬ 0BEC	
D					ஃ 0BCD		ஏ 0BED	
E	எ 0B8E	ஞ 0B9E	ம 0BAE	ா 0BBE			அ 0BEE	
F	ஏ 0B8F	ட 0B9F	ய 0BAF	ி 0BBF			க 0BEF	

க
0x0B95

க
0x0915

ग
0x0917

ப
0x0BAA

ब
0x092C

प
0x092A

	090	091	092	093	094	095	096	097
0	ँ 0900	ऐ 0910	ठ 0920	र 0930	ी 0940	ॐ 0950	ॠ 0960	॰ 0970
1	ँ 0901	ऑ 0911	ड 0921	ऱ 0931	ु 0941	ं 0951	ॡ 0961	ॱ 0971
2	ं 0902	ऒ 0912	ढ 0922	ल 0932	ू 0942	॒ 0952	ॢ 0962	ॲ 0972
3	ः 0903	ओ 0913	ण 0923	ळ 0933	ृ 0943	े 0953	ॣ 0963	ॴ 0973
4	ऄ 0904	औ 0914	त 0924	ऴ 0934	ॄ 0944	ॅ 0954	। 0964	ॵ 0974
5	अ 0905	क 0915	थ 0925	व 0935	ॅ 0945	ॅ 0955	॥ 0965	ॶ 0975
6	आ 0906	ख 0916	द 0926	श 0936	े 0946	॒ 0956	० 0966	ॷ 0976
7	इ 0907	ग 0917	ध 0927	ष 0937	े 0947	॒ 0957	१ 0967	ॸ 0977
8	ई 0908	घ 0918	न 0928	स 0938	ै 0948	क़ 0958	२ 0968	ॹ 0978
9	उ 0909	ङ 0919	ऩ 0929	ह 0939	ॉ 0949	ख़ 0959	३ 0969	ज़ 0979
A	ऊ 090A	च 091A	प 092A	ं 093A	ॊ 094A	ग़ 095A	४ 096A	ॺ 097A
B	ऋ 090B	छ 091B	फ 092B	ॉ 093B	ो 094B	ज़ 095B	५ 096B	ॻ 097B
C	ऌ 090C	ज 091C	ब 092C	़ 093C	ौ 094C	ड़ 095C	६ 096C	ॼ 097C
D	ऍ 090D	झ 091D	भ 092D	ऽ 093D	् 094D	ढ़ 095D	७ 096D	ॽ 097D
E	ऎ 090E	ञ 091E	म 092E	ा 093E	ॎ 094E	फ़ 095E	८ 096E	ॾ 097E
F	ए 090F	ट 091F	य 092F	ि 093F	ॏ 094F	य़ 095F	९ 096F	ॿ 097F

कला	kala kalaa ~~cala~~
कलर	kalar ~~color~~

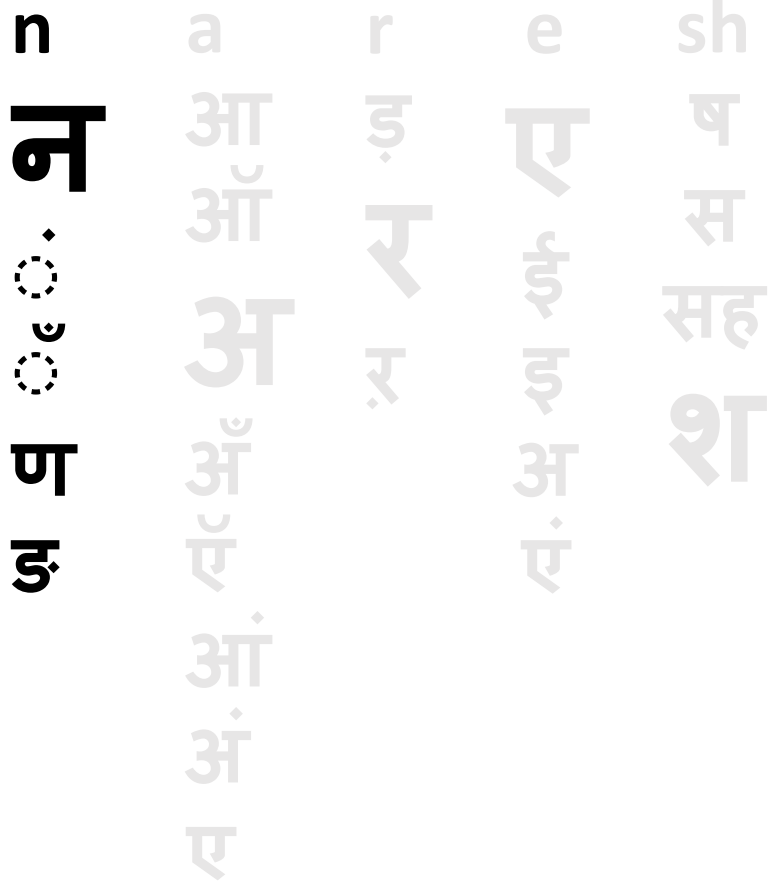
Approaches

naresh

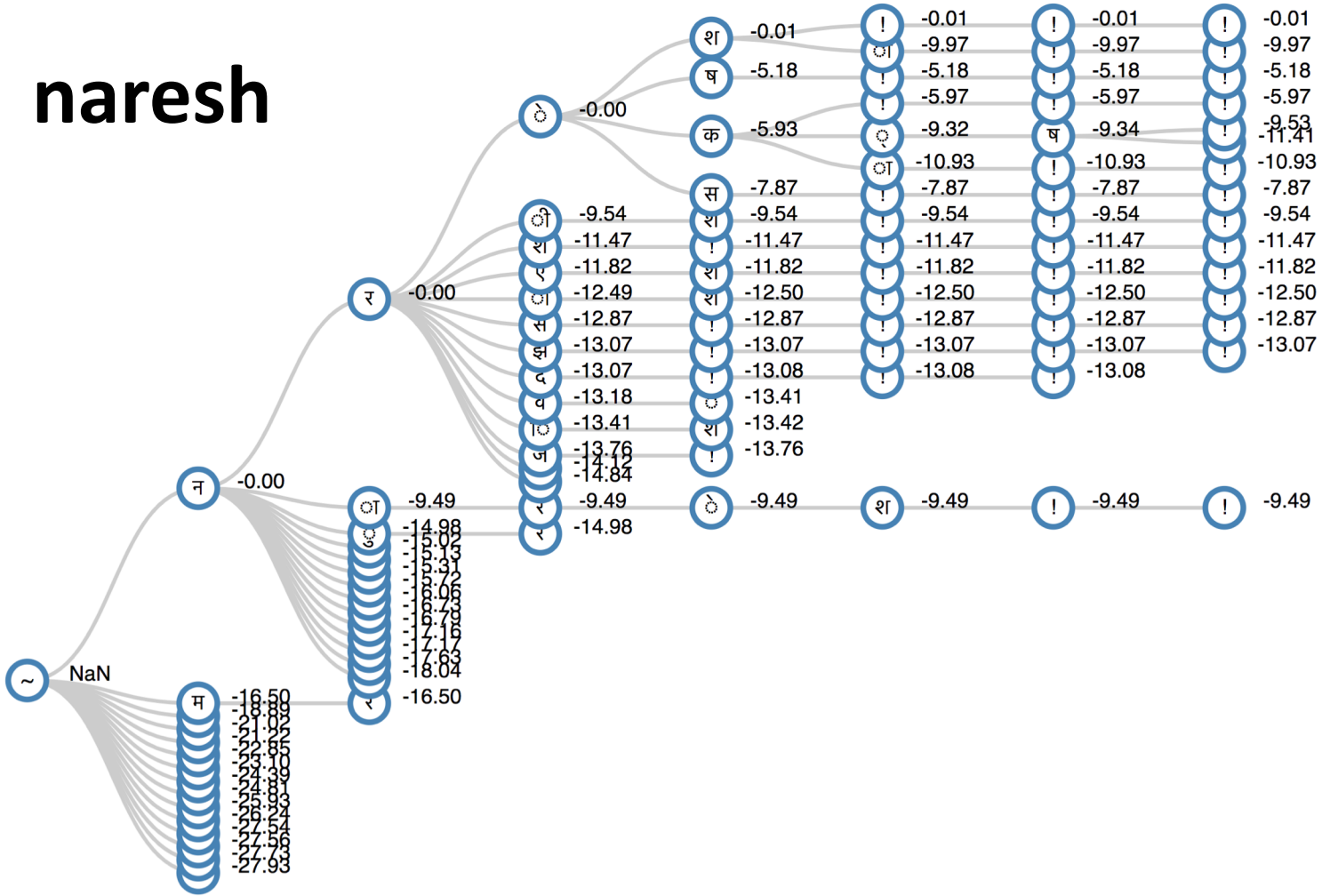
n	a	r	e	sh
न	आ	ड़	ए	ष
◌ं	ऑ	र	ई	स
◌ँ	अ	ऱ	इ	सह
ण	अँ		अ	श
ङ	ऍ		एं	
	आं			
	अं			
	ए			

narayanpur	नारायणपुर
nirala	निराला
nachne	नाचने
nizamabad	निजामाबाद
nachhipur	नाछिपुर
nandyala	नन्द्याला

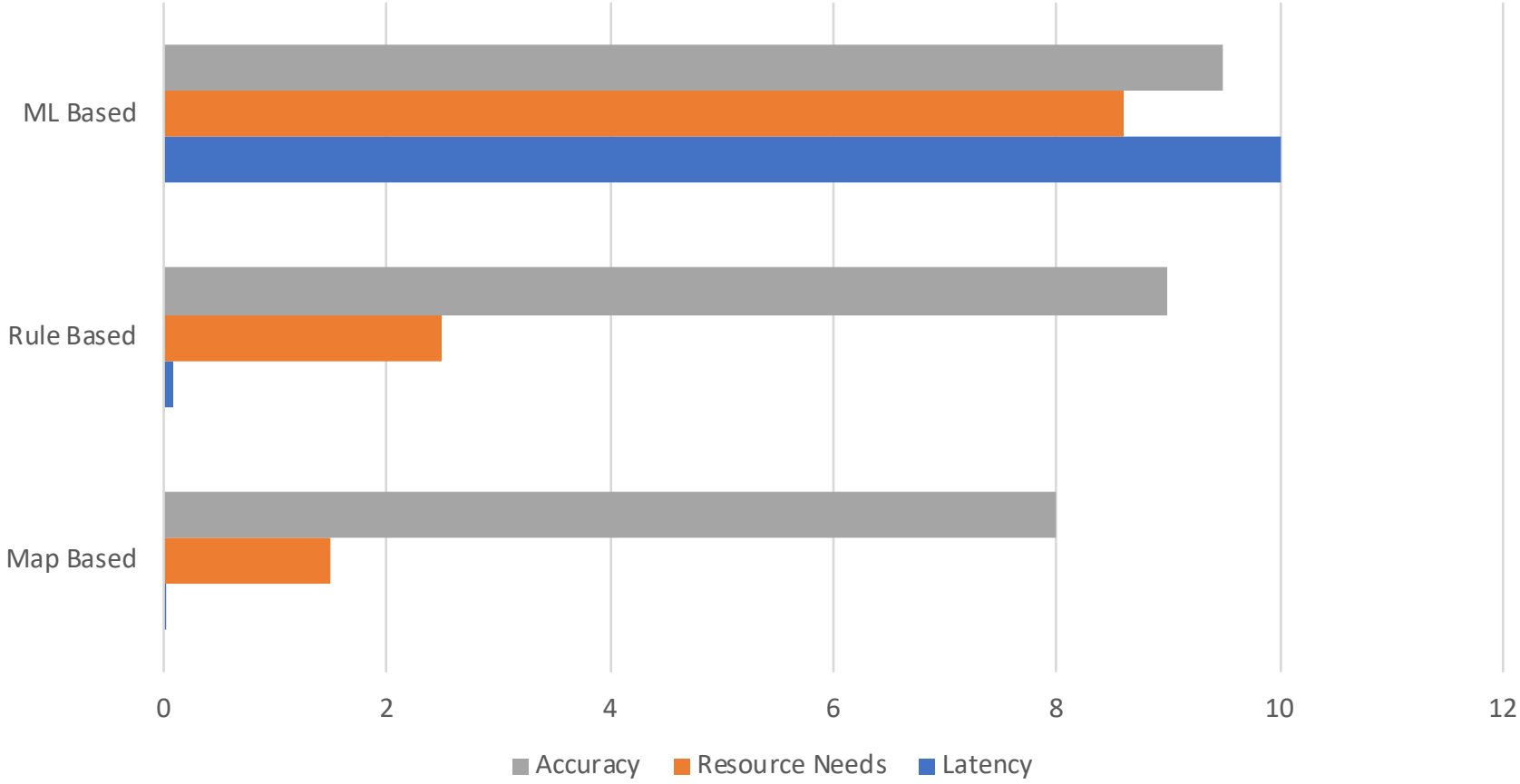
naresh



naresh


~
NaN
न
-0.00
म
-16.50
-18.89
-21.02
-21.22
-22.85
-23.10
-24.39
-24.81
-25.93
-26.24
-26.54
-27.56
-27.93
ा
-9.49
-14.98
र
-0.00
े
-0.00
ी
-9.54
श
-11.47
ष
-11.82
ा
-12.49
स
-12.87
झ
-13.07
ध
-13.07
व
-13.18
ि
-13.41
ज
-13.76
-14.12
-14.84
र
-9.49
-14.98
श
-0.01
ष
-5.18
क
-5.93
स
-7.87
श
-9.54
-11.47
-11.82
-12.50
-12.87
-13.07
-13.08
-13.41
श
-13.42
-13.76
े
-9.49
!
-0.01
ा
-9.97
-5.18
-5.97
ृ
-9.32
ा
-10.93
-7.87
-9.54
-11.47
-11.82
-12.50
-12.87
-13.07
-13.08
श
-9.49
!
-0.01
-9.97
-5.18
-5.97
ष
-9.34
-10.93
-7.87
-9.54
-11.47
-11.82
-12.50
-12.87
-13.07
-13.08
!
-9.49
!
-0.01
-9.97
-5.18
-5.97
-9.53
-11.41
-10.93
-7.87
-9.54
-11.47
-11.82
-12.50
-12.87
-13.07
!
-9.49

What to choose when?



choice of approaches

ML Based

Connected Applications
High Resource

Rules Based

No Connectivity
High Resource

Mapping Based

No Connectivity
Low Resource

QA

http://www.unicodeconference.org/eval-sp/